

# Artificial Intelligence

## Assignment 1

Nakul Thureja  
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### Factors Used:

- CGPA
- Courses
- Interests

### Code Snippet:

Ruleset: courses

Suggests your career on basis of that you have chosen all courses from a particular field

```
with ruleset('courses'):
    @ when_all(((m.course1 == "Machine Learning") | (m.course2 == "Machine Learning") |
(m.course3 == "Machine Learning") | (m.course4 == "Machine Learning") | (m.course5 == "Machine
Learning")))
        & ((m.course1 == "Artificial Intelligence") | (m.course2 == "Artificial
Intelligence") | (m.course3 == "Artificial Intelligence") | (m.course4 == "Artificial
Intelligence") | (m.course5 == "Artificial Intelligence"))
        & ((m.course1 == "Deep Learning") | (m.course2 == "Deep Learning") | (m.course3
== "Deep Learning") | (m.course4 == "Deep Learning") | (m.course5 == "Deep Learning")))
    def print_career(c):
        global flag
        if (flag):
            print("Career Recommended: Data Scientist")
            print("Since you have chosen courses related to Machine Learning, Artificial
Intelligence and Deep Learning, you are most likely to be interested in Data Science.")
            flag = False

    @ when_all(m.output == True)
    def print_career(c):
        global flag
        if (flag):
            print("Career Recommended: SDE (Software Development Engineer)")
            print("Since your interests and favourite courses do not coincide, we recommend you
to take up a career in the field of software development and further choose a more specific
career path down the line.")
            flag = False
```

Ruleset: career

Suggests your career on basis of that you have done some courses in the field of your interest

```
with ruleset('career'):
    @ when_all((m.interest == "Machine Learning")
                & (((m.course1 == "Machine Learning") | (m.course2 == "Machine
Learning") | (m.course3 == "Machine Learning") | (m.course4 == "Machine
Learning") | (m.course5 == "Machine Learning")))
                & ((m.course1 == "Artificial Intelligence") | (m.course2 ==
"Artificial Intelligence") | (m.course3 == "Artificial Intelligence") |
(m.course4 == "Artificial Intelligence") | (m.course5 == "Artificial
Intelligence"))))
                | (((m.course1 == "Machine Learning") | (m.course2 == "Machine
Learning") | (m.course3 == "Machine Learning") | (m.course4 == "Machine
Learning") | (m.course5 == "Machine Learning")))
                & ((m.course1 == "Deep Learning") | (m.course2 == "Deep
Learning") | (m.course3 == "Deep Learning") | (m.course4 == "Deep Learning") |
(m.course5 == "Deep Learning"))))
                | (((m.course1 == "Deep Learning") | (m.course2 == "Deep
Learning") | (m.course3 == "Deep Learning") | (m.course4 == "Deep Learning") |
(m.course5 == "Deep Learning")))
                & ((m.course1 == "Artificial Intelligence") | (m.course2 ==
"Artificial Intelligence") | (m.course3 == "Artificial Intelligence") |
(m.course4 == "Artificial Intelligence") | (m.course5 == "Artificial
Intelligence")))))
    def print_career(c):
        global flag
        if (flag):
            print("Career Recommended: Data Scientist")
            print("Since you have done two-three courses in the field of Machine
Learning, we recommend you to take up a career in the field of Data Science.")
            flag = False

    @ when_all(m.output == True)
    def print_career(c):
        global flag
        if (flag):
            c.assert_fact('courses', {'course1': c.m.course1, 'course2':
c.m.course2,
                                     'course3': c.m.course3, 'course4':
c.m.course4,
                                     'course5': c.m.course5, 'output':
c.m.output})
            flag = False
```

Ruleset: gpa

Divides your career on the basis of low and high cgpa

```
with ruleset('gpa'):
    @ when_all(m.cgpa <= 7.0)
    def gpa(c):
        global flag
        if (flag):
            print("Career Recommended: SDE\nDue to your CGPA system recommends you to go for
SDE and get better at skills and then choose a more specific career path")
            flag = False

    @ when_all(m.cgpa > 7.0)
    def gpa(c):
        global flag
        if (flag):
            c.assert_fact('career', {'course1': c.m.course1, 'course2': c.m.course2,
                                     'course3': c.m.course3, 'course4': c.m.course4,
                                     'course5': c.m.course5, 'interest': c.m.interest,
                                     'output': c.m.output})

            flag = False
```

## Sample Run 1:

```
Career Advisory System for College Students of IIIT DELHI
Enter your Name: nakul

Enter Your CGPA: 9

Interests:
1. Machine Learning
2. Cyber Security
3. Electronics
4. Finance
5. UI-UX Designer
6. Mathematics and Computing
Enter Your Interest: 1

Courses:
1. Machine Learning
2. Artificial Intelligence
3. Deep Learning
4. Computer Networks
5. Fundamentals of Computer Security
6. Network Security
7. Human Computer Interaction
8. Prototyping Interactive Systems
9. 3D Animation
10. Digital Circuits
11. Basic Electronics
12. Signals and Systems
13. Data Structures and Algorithms
14. Algorithm Design and Analysis
15. Intro to Programming
16. Linear Algebra
17. Probability and Statistics
18. Calculus
19. Money and Banking
20. Foundations of Finance
21. Economics
Enter Course Number 1: 2
Enter Course Number 2: 5
Enter Course Number 3: 1
Enter Course Number 4: 7
Enter Course Number 5: 3
Career Recommended: Data Scientist
Since you have done two-three courses in the field of Machine Learning, we recommend you to take up a career in the field of Data Science.
nakul@nakul-TP5: ~/Desktop/ATA3$
```

## Sample Run 2:

```
Career Advisory System for College Students of IIIT DELHI
Enter your Name: nakul

Enter Your CGPA: 8

Interests:
1. Machine Learning
2. Cyber Security
3. Electronics
4. Finance
5. UI-UX Designer
6. Mathematics and Computing
Enter Your Interest: 2

Courses:
1. Machine Learning
2. Artificial Intelligence
3. Deep Learning
4. Computer Networks
5. Fundamentals of Computer Security
6. Network Security
7. Human Computer Interaction
8. Prototyping Interactive Systems
9. 3D Animation
10. Digital Circuits
11. Basic Electronics
12. Signals and Systems
13. Data Structures and Algorithms
14. Algorithm Design and Analysis
15. Intro to Programming
16. Linear Algebra
17. Probability and Statistics
18. Calculus
19. Money and Banking
20. Foundations of Finance
21. Economics
Enter Course Number 1: 1
Enter Course Number 2: 5
Enter Course Number 3: 10
Enter Course Number 4: 15
Enter Course Number 5: 2
Career Recommended: SDE (Software Development Engineer)
Since your interests and favourite courses do not coincide, we recommend you to take up a career in the field of software development and further choose a more specific career path down the line.
nakul@nakul-TP5: ~/Desktop/ATA3S
```

### Sample Run 3:

```
nakul@nakul-IP5:~/Desktop/AIA3$ /bin/python3 /home/nakul/Desktop/AIA3/main.py
Career Advisory System for College Students of IIIT DELHI
Enter your Name: nakul
```

```
Enter Your CGPA: 6
```

```
Interests:
```

1. Machine Learning
2. Cyber Security
3. Electronics
4. Finance
5. UI-UX Designer
6. Mathematics and Computing

```
Enter Your Interest: 4
```

```
Courses:
```

1. Machine Learning
2. Artificial Intelligence
3. Deep Learning
4. Computer Networks
5. Fundamentals of Computer Security
6. Network Security
7. Human Computer Interaction
8. Prototyping Interactive Systems
9. 3D Animation
10. Digital Circuits
11. Basic Electronics
12. Signals and Systems
13. Data Structures and Algorithms
14. Algorithm Design and Analysis
15. Intro to Programming
16. Linear Algebra
17. Probability and Statistics
18. Calculus
19. Money and Banking
20. Foundations of Finance
21. Economics

```
Enter Course Number 1: 3
```

```
Enter Course Number 2: 6
```

```
Enter Course Number 3: 5
```

```
Enter Course Number 4: 10
```

```
Enter Course Number 5: 1
```

```
Career Recommended: SDE
```

```
Due to your CGPA system recommends you to go for SDE and get better at skills and then choose a more specific career path
```

### Sample Run 4:

Career Advisory System for College Students of IIIT DELHI  
Enter your Name: nakul

Enter Your CGPA: 10

Interests:

1. Machine Learning
2. Cyber Security
3. Electronics
4. Finance
5. UI-UX Designer
6. Mathematics and Computing

Enter Your Interest: 3

Courses:

1. Machine Learning
2. Artificial Intelligence
3. Deep Learning
4. Computer Networks
5. Fundamentals of Computer Security
6. Network Security
7. Human Computer Interaction
8. Prototyping Interactive Systems
9. 3D Animation
10. Digital Circuits
11. Basic Electronics
12. Signals and Systems
13. Data Structures and Algorithms
14. Algorithm Design and Analysis
15. Intro to Programming
16. Linear Algebra
17. Probability and Statistics
18. Calculus
19. Money and Banking
20. Foundations of Finance
21. Economics

Enter Course Number 1: 1

Enter Course Number 2: 5

Enter Course Number 3: 10

Enter Course Number 4: 15

Enter Course Number 5: 20

Career Recommended: SDE (Software Development Engineer)

Since your interests and favourite courses do not coincide, we recommend you to take up a career in the field of software development and further choose a more specific career path down the line.